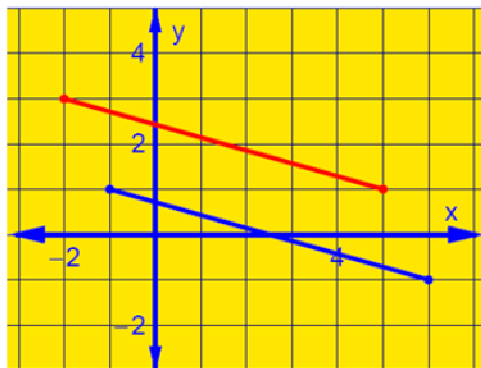


Homework Review

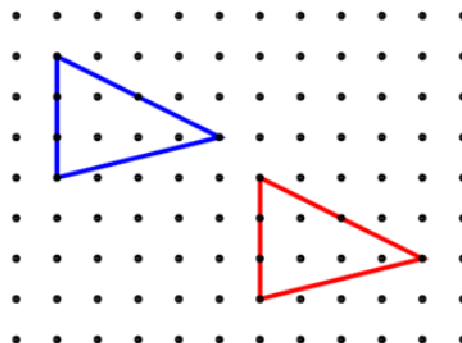
14.2

1.



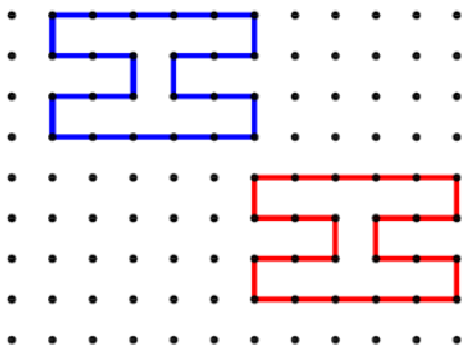
14.2

2.

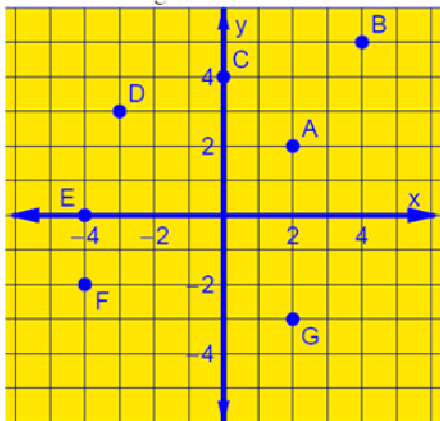


14.2

3.



14.2



4. What is the image of D under the translation $\langle 3, 1 \rangle$?

5. What vector describes $F \rightarrow A$?

6. What is the image of C under the translation $\langle -4, -4 \rangle$?

7. What vector describes $H \rightarrow B$?

8. What is the image of A under the translation $\langle -5, 0 \rangle$?

9. What vector describes $C \rightarrow F$?

14.2

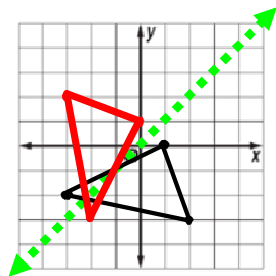
- Find a single translation that has the same effect as each composition of translations.

10. $\langle 2, 6 \rangle$ followed by $\langle -4, -9 \rangle$

11. $\langle -3, 2 \rangle$ followed by $\langle 3, 7 \rangle$

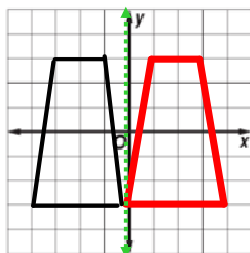
9-1 Skills Practice

5. $\triangle ABC$ with vertices $A(-3, 2)$, $B(0, 1)$, and $C(-2, -3)$ in the line $y = x$



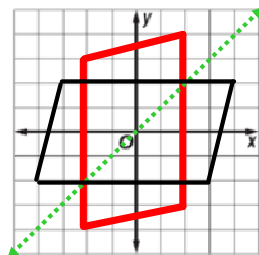
9-1 Skills Practice

6. trapezoid $DEFG$ with vertices $D(0, -3)$, $E(1, 3)$, $F(3, 3)$, and $G(4, -3)$ in the y -axis



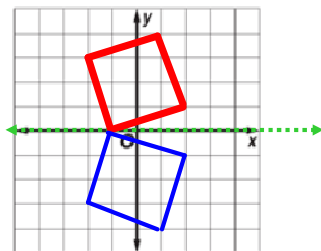
9-1 Skills Practice

7. parallelogram $RSTU$ with vertices $R(-2, 3)$, $S(2, 4)$, $T(2, -3)$ and $U(-2, -4)$ in the line $y = x$



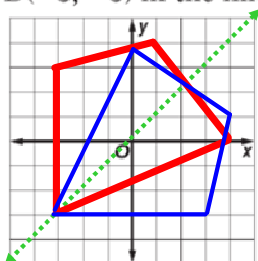
9-1 Skills Practice

8. square $KLMN$ with vertices $K(-1, 0)$, $L(-2, 3)$, $M(1, 4)$, and $N(2, 1)$ in the x -axis



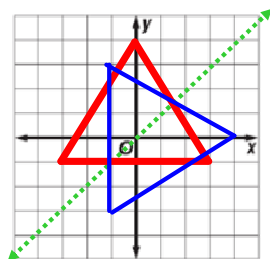
9-1 Practice

3. quadrilateral $ABCD$ with vertices $A(-3, 3)$, $B(1, 4)$, $C(4, 0)$, and $D(-3, -3)$ in the line $y = x$



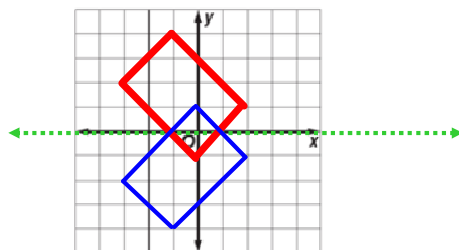
9-1 Practice

4. $\triangle FGH$ with vertices $F(-3, -1)$, $G(0, 4)$ and $H(3, -1)$ in the line $y = x$



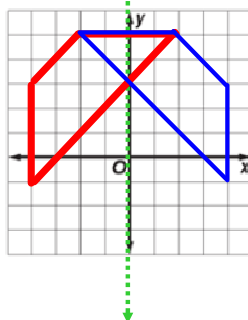
9-1 Practice

5. rectangle $QRST$ with vertices $Q(-3, 2)$, $R(-1, 4)$, $S(2, 1)$, and $T(0, -1)$ in the x -axis



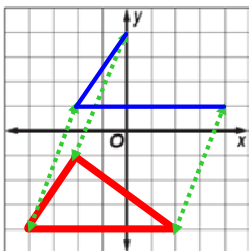
9-1 Practice

6. trapezoid $HIJK$ with vertices $H(-2, 5)$, $I(2, 5)$, $J(-4, -1)$, and $K(-4, 3)$ in the y -axis



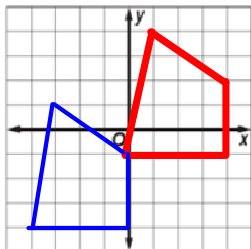
9-2 Skills Practice

5. $\triangle JKL$ with vertices $J(-4, -4)$, $K(-2, -1)$, and $L(2, -4)$; $\langle 2, 5 \rangle$



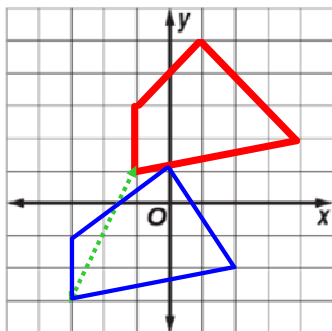
9-2 Skills Practice

6. quadrilateral $LMNP$ with vertices $L(4, 2)$, $M(4, -1)$, $N(0, -1)$, and $P(1, 4)$; $\langle -4, -3 \rangle$



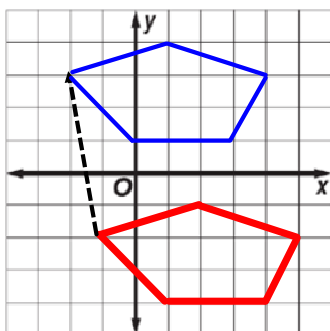
9-2 Practice

3. quadrilateral $TUWX$ with vertices $T(-1, 1)$, $U(4, 2)$, $W(1, 5)$, and $X(-1, 3)$; $\langle -2, -4 \rangle$



9-2 Practice

4. pentagon $DEFGH$ with vertices $D(-1, -2)$, $E(2, -1)$, $F(5, -2)$, $G(4, -4)$, and $H(1, -4)$; $\langle -1, 5 \rangle$



9-2 Practice

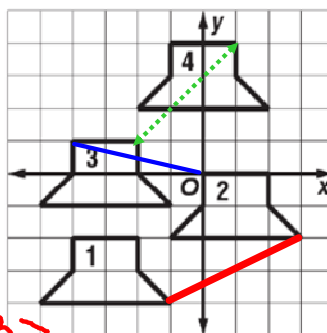
5. figure 1 \rightarrow figure 2

$\langle 4, 2 \rangle$

6. figure 2 \rightarrow figure 3

$\langle -4, 1 \rangle$

7. figure 3 \rightarrow figure 4 $\langle 3, 3 \rangle$



Rotations

December 7, 2009

Objectives

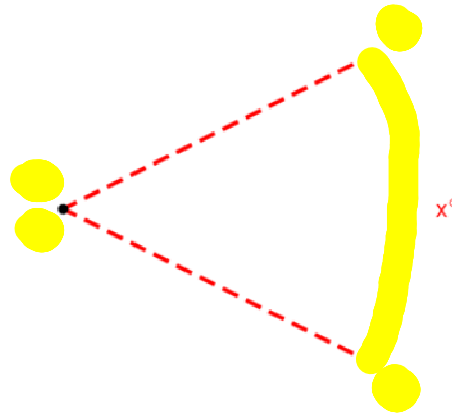
- Learn and apply the properties of rotations, verbally and in writing.

What is a rotation?

- The third transformation we will investigate is called a rotation.
- In order to describe a rotation, you need to know the center of rotation, the angle of rotation, and the direction of rotation.
- The direction of rotation can either be clockwise or counterclockwise. All rotations that we perform in this class will be in a counterclockwise direction unless otherwise noted.

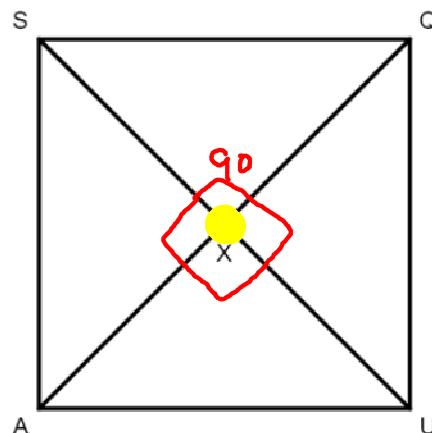
More about rotations

- A rotation of x° about a point R is a transformation such that:
- For any point Q, $RQ' = RQ$ and $m\angle QRQ' = x$.
- The image of R is itself (i.e., $R' = R$)



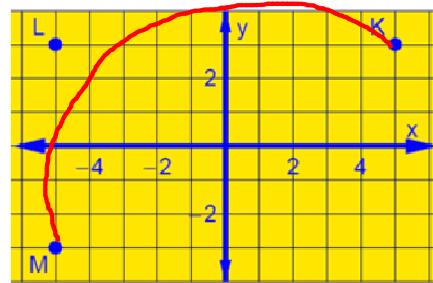
Square SQUA is divided into 4 congruent triangles.

- Name the image of Q under a 90° rotation about X. **S**
- Name the image of U under a 270° rotation about X. **A**
- If $Q \rightarrow S$, then $S \rightarrow U$, describe a single rotation that maps Q to U. **270°**
- What is the image of any point under a 360° rotation? **itself**



Using a graph

- Graph the point $K(5, 3)$ and L its reflection image in the y -axis.
- Then graph M , the reflection image of L in the x -axis. Describe a rotation that maps K to M .



180

More with graphs

- Graph the point $A(3, 4)$ and rotate it 90° about the origin. Label its image B .
- Now rotate B 90° about the origin and label its image C .
- Finally, rotate C 90° about the origin and label its image D .
- What do you notice about the coordinates of each new image with respect to its preimage?

